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**HUMAN ZONA PELLUCIDA PROTEIN 3 AND USES THEREOF****ABSTRACT OF THE INVENTION**

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The present invention provides a method to determine sperm activity comprising the steps of: (a) contacting an appropriate concentration of human zona pellucida protein 3 with an appropriate amount

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of sperm under conditions permitting the formation of a complex between the human zona pellucida protein 3 and the sperm; and (b) determining the complex form. The invention further provides a method to determine sperm activity comprising the

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steps of (a) contacting an appropriate concentration of human zona pellucida protein 3 with an appropriate amount of sperm under conditions permitting an acrosome reaction to occur; and (b) determining the extent of the acrosome reaction.

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Finally, this invention provides a diagnosis kit for sperm activity comprising three (3) compartments with (a) an appropriate amount of human zona pellucida protein 3; (b) the reagents used for establishing the conditions for allowing the binding of sperm; and (c) the reagents used for establishing the conditions for allowing an acrosome reaction.

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